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Climate characteristics of heating period for Volga Federal District

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Abstract

In this article, we consider results of performed research, dedicated to assessment of changes in parameters of heating period (HP) of Volga Federal District (VFD). For the first time for territory of VFD we created maps for space distribution of the main characteristics of heating period; we investigated peculiarities of multiannual dynamics of characteristics of heating period that had been previously unknown, and we assessed their multiannual tendencies; for the first time for VFD we tested tightness and directionalities of interconnections between various characteristics of heating period and estimated perspectives of the application for prognostic aims. It was stated that climate indices of heating period was characterized by high level of variability in both time and territory of the district. Temporary instability of climatic indices of heating period within the territory of the district increase at a high pace from its southern parts in the direction of North and North-East, where it reaches its maximal values, which is non-stochastic. We detected the presence of rather tight and significant connections between the dates of autumn switches of mean daily air temperature (MDAT) through 8°C and the length, which opens possibility of building one-factor regressive prognostic models with significant resolving capacity at coefficient of their determination of [R2(О,П)]=38÷52%.

Keywords

Air temperature, Dates of beginning and end of heating period, Heating period, Length